

Walking Your Fields®



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Gray leaf spot (GLS) can be found in most cornfields throughout northern Illinois. Excessive rainfall and high humidity has allowed this disease to flourish. GLS can usually be found every year at some level, so the presence of the disease at this time of year is not alarming. However, the severity of the infection and the growth stage of the crop is the issue this summer. The crop is at least two to three weeks behind normal. When late planting is combined with heavy disease pressure, larger yield losses from the disease can be expected. While disease lesions on the lower leaves of the corn plant will not significantly impact corn yield, favorable weather for disease development will allow the disease to spread to the upper leaves. Significant disease infection above the ear will have the largest impact on yield.

Scout cornfields prior to tassel to determine the severity of GLS infection and if a foliar fungicide application is needed. One rule of thumb often used when scouting is the 2:2:1 method: 2 lesions on the 2nd leaf below the ear leaf on 1 out of every 2 plants.



Image by Gary Munkvold.

The time for fungicide application should be from full tassel to early brown silk. **Do not apply before tassel emergence.** Many cornfields are uneven this year which could potentially make timing of application extremely difficult. Try to get as much of the field at full

tassel as possible before application. Avoid using a non-ionic surfactant when applying fungicides, especially pre-tassel.

Corn development varies greatly around the area, from some fields that are past pollination to fields where plants are still in early to mid vegetative stages. This will spread the pollination window over several weeks. The period from just prior to pollination through the first couple weeks after pollination plays a huge role in determining final yield. The pollinated ear length is determined at this time, and is highly dependent on moisture, temperature, and sunlight quality.

A shortage of pollen is rarely a problem, even in fields that are highly variable in development. A normal-sized ear can have from 650 to 1000 ovules (potential kernels). Each tassel produces from two million to five million pollen grains. Those are pretty good odds for fertilizing the ovule!



Silk clipping is a potential problem, particularly in late-silking fields or pockets of delayed plants. Silk-clipping insects (e.g. western corn rootworm adults (top photo), Japanese beetles (bottom photo)) are typically sporadic pests that usually only affect field edges and scattered plants. However, if fields are highly variable in terms of silking, it is possible for the insects to concentrate in those late-silking spots in the field and cause considerable damage in pockets. Scout the fields and consider an insecticide if silks are clipped to ½ inch or less before 50% pollination.



Western bean cutworm (WBCW) moths can be identified by the crescent moon-shaped markings on their wings. Lists of moth captures by area can be found at the WBCW Monitoring Network: <http://www.ent.iastate.edu/trap/westernbeanculwrm/>.



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Begin scouting for WBCW egg masses as soon as moths are regularly caught in your area. Eggs, found on the topside of the leaf, are pearly white when freshly laid and turn purple prior to hatching.

Eggs will hatch seven to ten days after they are laid. **Hybrids with Herculex® I or Herculex XTRA traits are protected from WBCW larvae damage.** Larvae must be controlled in non-Herculex hybrids before they bore into the husk, where they are protected from an insecticide application.



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Soybean aphids appear to be off to a slow start, but it's not too early to begin scouting. The recommended time to scout for aphids is when soybeans are in the late vegetative stage. In addition to scouting for the actual aphids, look for more subtle signs of aphid activity—honeydew, black sooty mold, and beneficial insects such as lady beetles. Soybean aphids are favored by moderate temperatures (77 to 82° F). Use the following information as treatment decisions are made:

- Low aphid populations – if aphids are present, but at < 250 per plant, plan to check back every two to three days since populations can double that quickly.
- 250 aphids per plant – if populations are increasing, this is the *economic threshold*. Treating within seven days is required to prevent populations from reaching the *economic injury level* where yield loss exceeds the cost of treatment. Pyrethroid insecticides such as DuPont™ Asana® XL are very effective in controlling soybean aphids and providing residual control. Always read and follow the label.

- Severe and rising aphid populations – for more rapid knockdown of already high populations, consider an application of DuPont™ Lannate® LV + Asana® XL. This combination provides quick knockdown and residual control.



Soybean aphids colonizing leaves (left) and stem (right) of soybean plant are at economic levels in these pictures.

Fungicide applications to soybeans should be applied around the R3 stage. University studies have shown that a fungicide treatment can improve yields in excess of four bushels per acre. If insect pressures warrant a control, add an insecticide such as Asana® XL for control.

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